REMARKS/ARGUMENTS

Claims 1, 7-12, 18-23, 29-34, 39 and 45-71 are pending in the application. Claims 1, 12, 23, 34 and 39 are independent claims.

Rejection under 35 U.S.C. § 103(a) over Kim in view of Urbaniak

Claims 1, 7-12, 18-23, 29-34, 39 and 45-71 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 7,286,558 ("Kim") in view of U.S. Patent No. 5,875,214 ("Urbaniak"). The Applicants respectfully traverse this art grounds of rejection.

1. Urbaniak does not cure Kim's admitted deficiencies because the Viterbi decoder in Urbaniak is not used to detect packet presence.

As an initial matter, the Applicants agree with the Examiner's statement that "Kim does not explicitly teach that the presence of a packet is determined based on a likelihood generated by a maximum likelihood decoder that decodes the rate indicator channel" (e.g., see Page 4 of the 8/19/2010 Office Action). The Examiner cites to Urbaniak for curing this particular deficiency of Kim.

Urbaniak is directed to a device for initializing a Viterbi decoder in a receiver for signals transmitted in the form of bursts, whereby a detector is used to detect a synchronization word, and in response to a detection of the synchronization word, signals are relayed to the Viterbi decoder for decoding (e.g., see Urbaniak, Abstract). In particular, Urbaniak states the following:

> The initialization device shown in FIG. 2 receives at its input two digital bit streams P and Q from a demodulator (not shown) on its input side. It includes means 12 for detecting the synchronization word in each received burst. These detection means comprise an energy detector followed by a correlator supplying a signal DET when the synchronization word is recognized, for example … The signal DET comprises a pulse having the same duration as a symbol marking the presence of the first message data symbol, for example. The detector means can also resolve ambiguity as to the phase of the bit streams P and Q and supply at the output bit streams P1 and Q1 corresponding to the bit streams P and Q with this ambiguity resolved..The bit streams P1 and Q1 (or the bit streams P and Q if there is no provision for resolving ambiguity) and the detection signal DET are fed to multiplexing means 13 which supply to the Viterbi decoder 11 the signals received …
>
> *(e.g., see Col. 3, lines 18-36 of Urbaniak, Emphasis Added)*

A review of the emphasized portion of the above-excerpt of Urbaniak indicates that a detection means 12 is relied upon for monitoring energy of a received signal spectrum to detect

and recognize a synchronization word. The synchronization word is the flag that precedes actual packet data. Only after the detection means 12 detects the synchronization word are demodulated data streams passed to the Viterbi decoder 11. Thus, the Viterbi decoder 11 in Urbaniak is not actually relied upon to detect packet presence. Rather, the presence of data must already have been detected at a lower-level by the detection means 12 for the functionality of the Viterbi decoder 11 to be invoked in the first place.

Accordingly, the Applicants respectfully submit that Urbaniak does not cure Kim's admitted failure to disclose "determining the presence of a packet on the rate indicator channel based on a likelihood generated by a maximum likelihood decoder that decodes the rate indicator channel" as recited in independent claim 1 and similarly recited in independent claims 1, 12, 23, 34 and 39 distinguish over the combination of Kim in view of Urbaniak.

As such, claims 7-11, 18-22, 29-33 and 45-71, dependent upon independent claims 1, 12, 23 and 34, respectively, are likewise allowable over the combination of Kim in view of Urbaniak at least for the reasons given above with respect to the independent claims.

The Applicants respectfully request that the Examiner withdraw this art grounds of rejection.

2. With respect to claim 71, the R-RICH of Kim does not appear to be a "discontinuous transmission channel" as claimed.

Claim 71 recites "wherein the rate indicator channel is a discontinuous transmission channel". The Applicants note that both the subject application and Kim include references to the R-RICH, so one would normally presume their implementations to be similar. Indeed, the R-RICHs in the subject application and Kim are similar in that their respective R-RICHs each indicate the data rate of a corresponding bursty supplemental channel (SCH). However, upon the Applicants review of Kim's description of its R-RICH, the Applicants believe that Kim's R-RICH is actually implemented as a continuous transmission channel, as will be explained below.

Firstly, regarding support for claim 71, the Applicants direct the Examiner to [0044] of the subject application, which states:

> [0044] Conversely, when the R-ESCH is not transmitting, the R-RICH transmits a zero-rate packet periodically, usually at a fixed frame boundary such as the boundary of 80 ms frames. The rate indicator packet may have a length that is less than the frame length (e.g.

> 10 ms) so that the duty cycle of the R-RICH may be less than 100% when only zero-rate packets are being transmitted.
>
> *(e.g., see [0044] of the subject application)*

Thus, when the corresponding SCH is not transmitting in an embodiment of the subject application, the duty cycle of the R-RICH is less than the entire frame length (e.g., less than 10 ms when the frame boundary can be 80 ms, for instance, leaving 70+ ms with no transmission). This means that there are times when the R-RICH is not transmitting, i.e., a discontinuous channel. Likewise, [0046] of the subject application goes on to state "[b]ecause of the non-continuous nature of transmissions on the R-ESCH and R-RICH" and/or "since transmission on the corresponding R-RICH is not continuous".

By contrast, the R-RICH in Kim is described as transmitting throughout each 20 ms frame, even when its corresponding SCH has a data rate of zero. For example, in Table 1 on Col 2 of Kim, a zero-date rate for a corresponding SCH is designated by a R-RICH sequence of '0000'. This code sequence (or any other code sequence that indicates a positive data rate) is converted into code symbols and is then transmitted as follows:

> A Walsh spreader 105 spreads the 384 code symbols received from the signal point mapper 104 with a predetermined Walsh code of length 64 assigned to the R-RICH. The spread signal is transmitted to the base station in a 20-ms reverse frame…
>
> *(e.g., see Col. 2, lines 10-14 of Kim)*

Similarly, while Kim attempts to reduce the number of bits sent on the R-RICH while still conveying the SCH's data rate, Kim's detailed description is still directed to transmitting the SCH's data rate via the R-RICH sequence at each 20 ms frame, as follows:

> The reason of adjusting the number of bits of the R-RICH sequence using equation (1) is to minimize the R-RICH sequence bit number according to the amount of transmission information so that the R-RICH sequence is coded at a minimum code rate and thus performance is improved. The encoder 302 in FIG. 3 encodes the R-RICH sequence received from the controller 301 at a code rate R=k/n (e.g., n=24) …… The Walsh spreader 305 spreads the 374 code symbols received from the signal point mapper 304 with a Walsh code of, for example, length 64 assigned to the R-RICH. The spread signal is transmitted in a reverse frame of 20 ms in duration.
>
> *(e.g., see Col. 5, lines 17-40 of Kim)*

Accordingly, the Applicants believe that Kim teaches that both zero-rate codes (or R-RICH sequences) and positive-rate codes, which indicate the data rate of the corresponding SCH, are transmitted on the R-RICH at each 20 ms frame continuously. Thus, while the corresponding

SCH whose data rate is indicated by the R-RICH is itself discontinuous (or bursty), the R-RICH itself in Kim is actually continuous (non-bursty).

For this reason, the Applicants respectfully submit that Kim's R-RICH is not a "discontinuous transmission channel" as recited in claim 71.

An indication of allowance for claim 71 is thereby requested for at least this additional reason.

CONCLUSION

In light of the remarks and/or amendments contained herein, Applicants submit that the application is in condition for allowance, for which early action is requested.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

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